



Part no.: 50132990
MSI-EM-IO84-01
Safe I/O module



Figure can vary

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Circuit diagrams
- Notes

Technical data

Basic data	
Series	MSI-EM
Application	Monitoring of safety functions
Number of safe I/Os	8 IN, 4 OUT
Functions	
Functions	Extension module for the MSI 400 configurable safety control Extension with 8 safe inputs and 4 safe outputs (OSSDs)
Characteristic parameters	
Performance Level (PL)	e , EN ISO 13849-1
PFH _D	0.000000006 per hour
PFH _D	6E-09 per hour
Mission time T _M	20 years , EN ISO 13849-1
Category	4 , EN ISO 13849
Electrical data	
Performance data	
Supply voltage U _B	24 V , DC , -30 ... 25 %
Power consumption, max.	1.1 W
Output circuit	
Number of outputs	4 Piece(s)
Type of digital output	Transistor
Short circuit protection, outputs	Yes
Min. voltage permitted at the output	16.8 V
Max. voltage permitted at the output	30 V
Output current	4 A
Control circuit	
Number of inputs	8 Piece(s)
Voltage permitted at the input	30 V
Input current at signal 1	8 mA
Interface	
Type	Internal bus (SBUS+)
Connection	
Number of connections	1 Piece(s)
Connection 1	
Type of connection	Terminal
Function	Signal IN Signal OUT Voltage supply
Type of terminal	Screw terminal
No. of pins	16 -pin

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Cable properties

Connection cross sections	1 x 0.2 to 2.5 mm ² , wire 1 x 0.2 to 2.5 mm ² , wire 1 x 0.25 to 2.5 mm ² , wire with wire-end sleeve 2 x 0.2 to 1.0 mm ² , wire 2 x 0.2 to 1.0 mm ² , wire 2 x 0.25 to 1.0 mm ² , wire with wire-end sleeve
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Mechanical data

Dimension (W x H x L)	22.5 mm x 96.5 mm x 120.8 mm
Net weight	180 g
Housing color	Gray
Type of fastening	Snap-on mounting

Environmental data

Ambient temperature, operation	-25 ... 65 °C
Ambient temperature, storage	-25 ... 70 °C
Relative humidity (non-condensing)	10 ... 95 %

Certifications

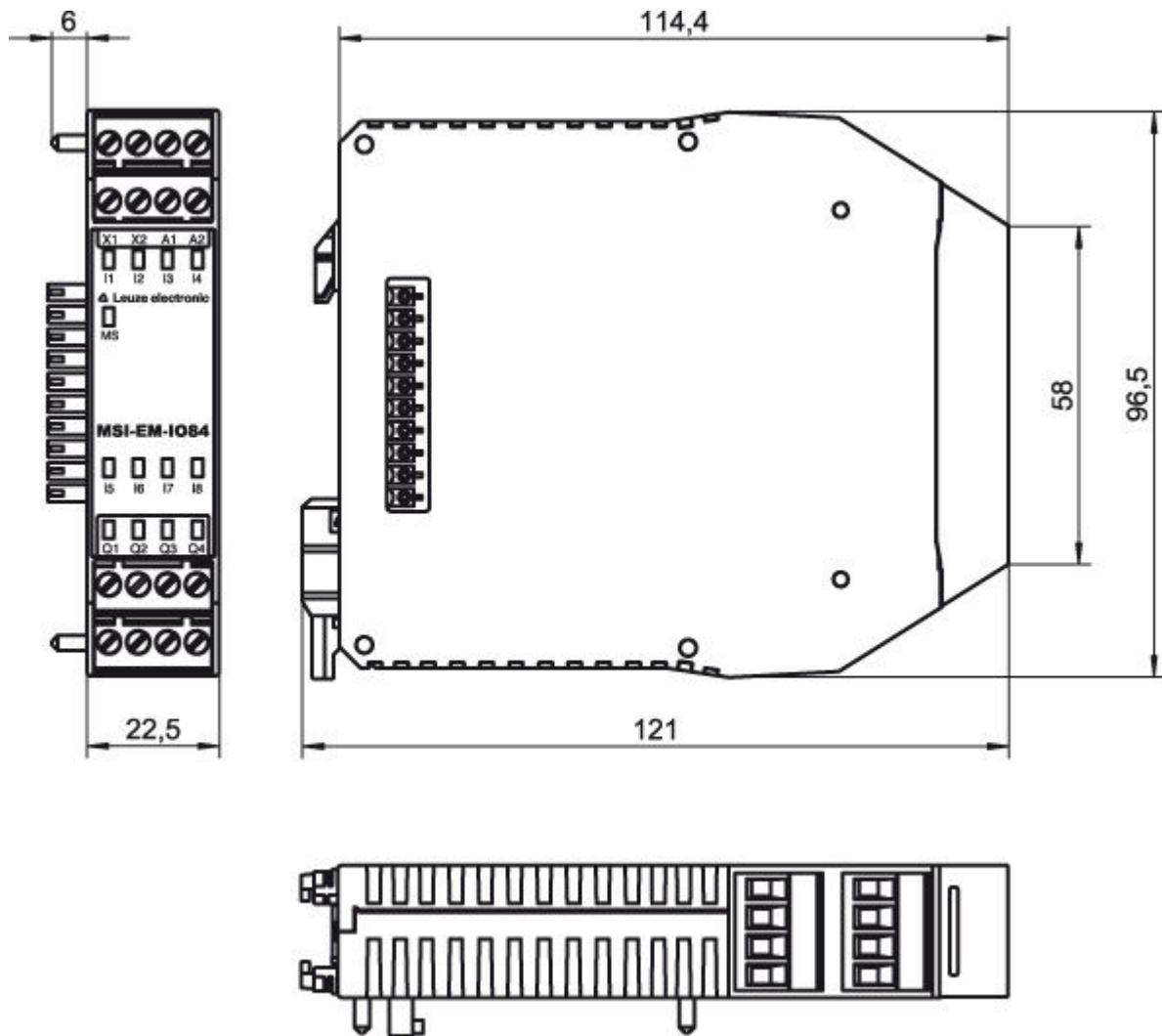
Degree of protection	IP 20 (terminals) IP 40 (housing)
Protection class	III
Certifications	c UL US TÜV Rheinland
Vibration resistance	5 ... 500 Hz
Test procedure for oscillation in accordance with standard	EN 60068-2-6
Shock resistance, single shock	30 g, 11 ms, EN 60068-2-27
Shock resistance, continuous shock	10 g, 16 ms, EN 60068-2-29

Classification

Customs tariff number	85364900
eCl@ss 8.0	27242204
eCl@ss 9.0	27242204
ETIM 5.0	EC001419
ETIM 6.0	EC001419

Dimensioned drawings

All dimensions in millimeters



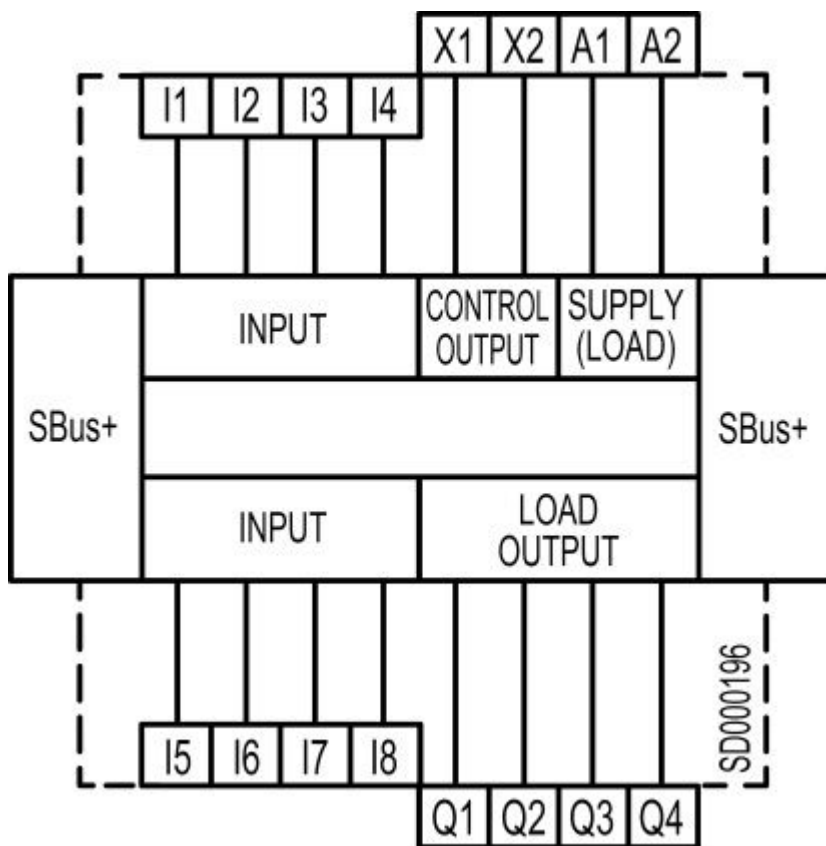
Electrical connection

Connection 1	
Type of connection	Terminal
Function	Signal IN Signal OUT Voltage supply
Type of terminal	Screw terminal
No. of pins	16 -pin

Terminal	Assignment
A1	+24V
A2	GND
I1	Safe input
I2	Safe input
I3	Safe input
I4	Safe input
I5	Safe input
I6	Safe input
I7	Safe input

Terminal	Assignment
I8	Safe input
Q1	Safe output
Q2	Safe output
Q3	Safe output
Q4	Safe output
X1	Test signal output
X2	Test signal output

Circuit diagrams



Notes

Observe intended use!

- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.